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IN THE CLAIMS

Please amend the claims as follows.

1. (currently amended) A method for ~~reproducing an electronic image (22), comprising pixels having an input pixel value  $I_p$  (21), on a multilevel output device having N allowable output pixel values (24), comprising the steps of:~~
  - ~~for each pixel p choosing a real subset  $S_p$  from said N allowable output pixel values (24), said subset  $S_p$  containing~~
  - ~~$N_p$  allowed output pixel values (24) where  $0 < N_p < N$ ,~~
  - ~~halftoning said electronic image by a multilevel halftoning algorithm by quantizing, for each of said pixels, said input pixel value (21) to obtain a corresponding output pixel value (24) out of the  $N_p$  allowed values in  $S_p$ ,~~
  - ~~rendering said image on said multilevel output device by~~
  - ~~rendering said pixels using said obtained output pixel values (24)~~

transforming an input image comprising pixels having a first state out of a first set of M ( $M > 2$ ) possible states into a halftoned image comprising quantized pixels having a second state out of a second set of N possible states, said second set being a real sub-set of said first set, the method comprising the steps of:

  - obtaining an input pixel from said input image, said input pixel having a first error corresponding to an error between a first modified pixel value and a first quantized pixel value;
  - modifying said input pixel to obtain a next modified pixel value by adding at least a portion of the first error;
  - selecting a third set of P possible states, said third set being a real sub-set of said second set;
  - quantizing said next modified pixel value to obtain a next quantized pixel value by selecting one state out of said third set; and

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calculating a next error as a difference between said next modified pixel value and said next quantized pixel value,  
wherein the step of selecting a third set depends on a state of said input pixel.

2-9 (cancelled)

10. (new) The method of claim 1, wherein said first, second and third sets of states of a pixel correspond with intensity levels of the pixel.

11. (new) The method of claim 1, wherein said first, second and third sets of states of a pixel correspond with combinations of ink levels of the pixel.

12. (new) The method according to claim 1, further comprising a step of rendering said halftoned image using said second set of N states.

13. (new) A controller for transforming an input image comprising pixels having a first state out of a first set of M ( $M > 2$ ) possible states into a halftoned image comprising quantized pixels having a second state out of a second set of N possible states, said second set being a real sub-set of said first set, said controller comprising:

means for obtaining an input pixel from said input image, said input pixel having a first error corresponding to an error between a first modified pixel value and a first quantized pixel value;

means for modifying said input pixel to generate a next modified pixel value by adding at least a portion of the first error;

means for selecting a third set of P possible states, said third set being a real sub-set of said second set;

means for quantizing said next modified pixel value to obtain a next quantized pixel value by selecting one state out of said third set;

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means for calculating a next error as a difference between said next modified pixel value and said next quantized pixel value; and  
means for selecting said third set as a function of a state of said input pixel.

14. (new) A system comprising:

a controller for transforming an input image comprising pixels having a first state out of a first set of  $M$  ( $M > 2$ ) possible states into a halftoned image comprising quantized pixels having a second state out of a second set of  $N$  possible states, said second set being a real sub-set of said first set, said controller comprising:

means for obtaining an input pixel from said input image, said input pixel having a first error corresponding to an error between a first modified pixel value and a first quantized pixel value;

means for modifying said input pixel to generate a next modified pixel value by adding at least a portion of the first error;

means for selecting a third set of  $P$  possible states, said third set being a real sub-set of said second set;

means for quantizing said next modified pixel value to obtain a next quantized pixel value by selecting one state out of said third set;

means for calculating a next error as a difference between said next modified pixel value and said next quantized pixel value; and

means for selecting said third set as a function of a state of said input pixel;

and

a rendering system capable of rendering said second set of  $N$  states.